```
=> file reg

=> s ceramidase/cn
L1            1 CERAMIDASE/CN

=> d

L1   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2003 ACS on STN
RN   56467-83-5  REGISTRY
CN   Ceramidase (9CI)  (CA INDEX NAME)
MF   Unspecified
CI   MAN
LC   STN Files:   AGRICOLA, BIOSIS, BIOTECHNO, CA, CAPLUS, EMBASE, TOXCENTER,
       USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE
             134 REFERENCES IN FILE CA (1907 TO DATE)
             134 REFERENCES IN FILE CAPLUS (1907 TO DATE)


=> file .nash

=> s ceramidase and (mice or mouse)

TOTAL FOR ALL FILES
L8          215 CERAMIDASE AND (MICE OR MOUSE)

=> s l8 and (purif? or character? or isolat?)
TOTAL FOR ALL FILES
L15          96 L8 AND (PURIF? OR CHARACTER? OR ISOLAT?)

=> s l15 not 2000-2003/py
L16           5 FILE MEDLINE
L17           4 FILE CAPLUS
L18           6 FILE SCISEARCH
L19           3 FILE LIFESCI
L20           6 FILE BIOSIS
L21           4 FILE EMBASE

TOTAL FOR ALL FILES
L22          28 L15 NOT 2000-2003/PY

=> dup rem l22
PROCESSING COMPLETED FOR L22
L23          11 DUP REM L22 (17 DUPLICATES REMOVED)

=> d ibib abs 1-11

L23  ANSWER 1 OF 11  CAPLUS  COPYRIGHT 2003 ACS on STN
ACCESSION NUMBER:         2000:751594  CAPLUS
DOCUMENT NUMBER:          133:330167
TITLE:                    Cloning and characterization of the human
                          and murine acid ceramidase cDNAs and genes,
                          and generation of acid ceramidase deficient
                          mice by gene targeting
AUTHOR(S):                Li, Chi-Ming
CORPORATE SOURCE:         Mount Sinai Sch. Med. New York Univ., USA
SOURCE:                   (1999) 171 pp.  Avail.: UMI, Order No. DA9961716
                          From: Diss. Abstr. Int., B 2000, 61(2), 664
DOCUMENT TYPE:            Dissertation
LANGUAGE:                 English
AB   Unavailable

L23  ANSWER 2 OF 11  SCISEARCH  COPYRIGHT 2003 THOMSON ISI on STN DUPLICATE 1
ACCESSION NUMBER:    1999:801229  SCISEARCH
THE GENUINE ARTICLE: 246FF
TITLE:               A fluorescence-based high-performance liquid
                     chromatographic assay to determine acid ceramidase
                     activity
AUTHOR:              He X X; Li C M; Park J H; Dagan A; Gatt S; Schuchman E H
```

(Reprint)
CORPORATE SOURCE: CUNY MT SINAI SCH MED, DEPT HUMAN GENET, BOX 1498, 1425 MADISON AVE, ROOM 14-20A, NEW YORK, NY 10029 (Reprint); CUNY MT SINAI SCH MED, DEPT HUMAN GENET, NEW YORK, NY 10029; CUNY MT SINAI SCH MED, INST GENE THERAPY & MOL MED, NEW YORK, NY 10029; HEBREW UNIV JERUSALEM, HADASSAH MED SCH, DEPT BIOCHEM, IL-91010 JERUSALEM, ISRAEL
COUNTRY OF AUTHOR: USA; ISRAEL
SOURCE: ANALYTICAL BIOCHEMISTRY, (15 OCT 1999) Vol. 274, No. 2, pp. 264-269.
Publisher: ACADEMIC PRESS INC, 525 B ST, STE 1900, SAN DIEGO, CA 92101-4495.
ISSN: 0003-2697.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 20
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Acid **ceramidase** (N-acylsphingosine amidohydrolase) is the lysosomal enzyme required to hydrolyze the N-acyl linkage between the fatty acid and sphingosine moieties in ceramide. A deficiency of acid **ceramidase** activity results in the lipid storage disorder, Farber disease, This study reports a new assay method to detect acid **ceramidase** activity in vitro using Bodipy or lissamine rhodamine-conjuggate ceramide (C12 ceramide: dodecanoylsphingosine), Using **mouse** kidney extracts as the source of acid **ceramidase** activity, this new method was compared with an assay using radioactive C12 ceramide (N-[C-14]-dodecanoylsphingosine) as a substrate. The Bodipy C12 ceramide substrate provided data very similar to those of the radioactive substrate, but under the experimental conditions tested, it was significantly more sensitive, Using Bodipy C12 ceramide, femtomole quantities of the product, Bodipy dodecanoic acid, could be detected, providing an accurate measure of acid **ceramidase** activity as low as 0.1 pmol/mg protein/h, Acid **ceramidase** activities in shin fibroblasts and EBV-transformed lymphoblasts from Farber disease patients were around 7.8 and 10% of those in normal cells, respectively, confirming the specificity of this new assay method. Based on these results, we suggest that this fluorescence-based, high-performance liquid chromatographic technique is a reliable, rapid, and highly sensitive method to determine acid **ceramidase** activity, and that it could be useful wherever the in vitro detection of acid **ceramidase** activity is of importance. (C) 1999 Academic Press.

L23 ANSWER 3 OF 11 MEDLINE on STN
ACCESSION NUMBER: 2000079156 MEDLINE
DOCUMENT NUMBER: 20079156 PubMed ID: 10610717
TITLE: Molecular cloning and **characterization** of a human cDNA and gene encoding a novel acid **ceramidase** -like protein.
AUTHOR: Hong S B; Li C M; Rhee H J; Park J H; He X; Levy B; Yoo O J; Schuchman E H
CORPORATE SOURCE: Department of Human Genetics, Mount Sinai School of Medicine, New York 10029, USA.
CONTRACT NUMBER: DK 54830 (NIDDK)
HD 28607 (NICHD)
SOURCE: GENOMICS, (1999 Dec 1) 62 (2) 232-41.
Journal code: 8800135. ISSN: 0888-7543.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000218
Last Updated on STN: 20000218
Entered Medline: 20000209

AB Computer-assisted database analysis of sequences homologous to human acid **ceramidase** (ASAH) revealed a 1233-bp cDNA (previously designated cPj-LTR) whose 266-amino-acid open reading frame had approximately 36% identity with the ASAH polypeptide. Based on this high degree of homology, we undertook further molecular **characterization** of cPj-LTR and now report the full-length cDNA sequence, complete gene

structure (renamed human ASAHL since it is a human acid **ceramidase** -like sequence), chromosomal location, primer extension and promoter analysis, and transient expression results. The full-length human ASAHL cDNA was 1825 bp and contained an open-reading frame encoding a 359-amino-acid polypeptide that was 33% identical and 69% similar to the ASAH polypeptide over its entire length. Numerous short regions of complete identity were observed between these two sequences and two sequences obtained from the Caenorhabditis elegans genome database. The 30-kb human ASAHL genomic sequence contained 11 exons, which ranged in size from 26 to 671 bp, and 10 introns, which ranged from 150 bp to 6.4 kb. The gene was localized to the chromosomal region 4q21.1 by fluorescence in situ hybridization analysis. Northern blotting experiments revealed a major 2.0-kb ASAHL transcript that was expressed at high levels in the liver and kidney, but at relatively low levels in other tissues such as the lung, heart, and brain. Sequence analysis of the 5'-flanking region of the human ASAHL gene revealed a putative promoter region that lacked a TATA box and was GC rich, typical features of a housekeeping gene promoter, as well as several tissue-specific and/or hormone-induced transcription regulatory sites. 5'-Deletion analysis localized the promoter activity to a 1. 1-kb fragment within this region. A major transcription start site also was located 72 bp upstream from the ATG translation initiation site by primer extension analysis. Expression analysis of a green fluorescence protein/ASAHL fusion protein in COS-1 cells revealed a punctate, perinuclear distribution, although no acid **ceramidase** activity was detected in the transfected cells using a fluorescence-based in vitro assay system.

L23 ANSWER 4 OF 11 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2000079155 MEDLINE
DOCUMENT NUMBER: 20079155 PubMed ID: 10610716
TITLE: The human acid **ceramidase** gene (ASAH): structure, chromosomal location, mutation analysis, and expression.
AUTHOR: Li C M; Park J H; He X; Levy B; Chen F; Arai K; Adler D A; Disteche C M; Koch J; Sandhoff K; Schuchman E H
CORPORATE SOURCE: Department of Human Genetics, Mount Sinai School of Medicine, New York 10029, USA.
CONTRACT NUMBER: DK 54830 (NIDDK)
HD 28607 (NICHD)
RR 0071 (NCRR)
SOURCE: GENOMICS, (1999 Dec 1) 62 (2) 223-31.
Journal code: 8800135. ISSN: 0888-7543.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000218
Last Updated on STN: 20010815
Entered Medline: 20000209

AB Acid **ceramidase** (AC) is the lysosomal enzyme that degrades ceramide into sphingosine and fatty acid. A deficiency in human AC activity leads to the lysosomal storage disorder, Farber disease (FD). The human AC gene (HGMW-approved symbol ASAH) was cloned and **characterized,** revealing an organization similar to that of the murine AC gene. The human gene spans about 30 kb in length and contains 14 exons ranging in size from 46 to 1201 bp. The exon/intron junctions were determined and found to follow the GT-AG rule. The putative promoter region had a GC content over 60%, lacked a TATA box, and contained several sequences matching transcription factor binding sites, including nine SP-1 sites, one AP-1 site, and three CACC boxes. The promoter activity of a 475-bp fragment from within this region was demonstrated by chloramphenicol acyltransferase assays. Northern blotting revealed variable expression of the human AC RNA; i.e., expression of the major 2.4-kb transcript was high in heart and kidney, followed by lung and placenta, but low in pancreas, liver, brain, and skeletal muscle. Two minor AC transcripts of 1.7 and 1.2 kb also were detected in heart and skeletal muscle. The human AC gene was mapped to the chromosomal region 8p21.3-p22 by in situ hybridization and FISH analyses, syntenic with the **mouse** chromosomal location. Finally, three new missense mutations, E138V, R254G, and P362R, were identified in the human AC gene

from FD patients. Mutant AC cDNAs containing these point mutations were constructed and examined using the FLAG-tagged expression system. Although the levels of protein expression for these mutant ACs were about equivalent to that of the controls, their enzymatic activity was markedly reduced, confirming their authenticity.

L23 ANSWER 5 OF 11 SCISEARCH COPYRIGHT 2003 THOMSON ISI on STN
ACCESSION NUMBER: 1999:793625 SCISEARCH
THE GENUINE ARTICLE: 245YZ
TITLE: Alkaline sphingomyelinases and **ceramidases** of the gastrointestinal tract
AUTHOR: Nilsson A (Reprint); Duan R D
CORPORATE SOURCE: UNIV LUND HOSP, DEPT MED, S-22185 LUND, SWEDEN (Reprint); UNIV LUND HOSP, DEPT CELL BIOL 1, S-22185 LUND, SWEDEN
COUNTRY OF AUTHOR: SWEDEN
SOURCE: CHEMISTRY AND PHYSICS OF LIPIDS, (NOV 1999) Vol. 102, No. 1-2, pp. 97-105.
Publisher: ELSEVIER SCI IRELAND LTD, CUSTOMER RELATIONS MANAGER, BAY 15, SHANNON INDUSTRIAL ESTATE CO, CLARE, IRELAND.
ISSN: 0009-3084.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 43

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB In addition to the acid and neutral sphingomyelinases (SMase) that occur in most tissues, distinct alkaline sphingomyelinases occur in the mucosa of the gastrointestinal tract and human bile. These enzymes exhibit **characteristic** properties with regard to bile-salt dependence, protease resistance, and longitudinal distribution in the gut. Alkaline SMase has now been partially **purified** from human bile and from rat small intestine. It is thought to have a role in sphingomyelin (SM) digestion but may also be important for the generation of antiproliferative sphingolipid messengers in the gut. It occurs throughout the whole length of the intestine and also in the colon. It is decreased in colon cancer tissue compared to surrounding mucosa and is extremely low in colon mucosa from patients with familial adenomatous polyposis (FAP). This chapter reviews the properties and potential physiological and pathophysiological significance of alkaline SMase. It also briefly summarizes the knowledge about sphingolipid digestion and about the **ceramidases** of the gut. (C) 1999 Published by Elsevier Science Ireland Ltd. All rights reserved.

L23 ANSWER 6 OF 11 SCISEARCH COPYRIGHT 2003 THOMSON ISI on STN
ACCESSION NUMBER: 1998:843584 SCISEARCH
THE GENUINE ARTICLE: 133NW
TITLE: Digestion of ceramide by human milk bile salt-stimulated lipase
AUTHOR: Nyberg L; Farooqi A; Blackberg L; Duan R D; Nilsson A; Hernell O (Reprint)
CORPORATE SOURCE: UMEA UNIV, DEPT PEDIAT, S-90185 UMEA, SWEDEN (Reprint); UMEA UNIV, DEPT PEDIAT, S-90185 UMEA, SWEDEN; UMEA UNIV, DEPT MED BIOCHEM & BIOPHYS, S-90185 UMEA, SWEDEN; SWEDISH DAIRIES ASSOC, LUND, SWEDEN; UNIV LUND HOSP, CTR EXPT RES, CELL BIOL DEPT 1, S-22185 LUND, SWEDEN; UNIV LUND HOSP, DEPT MED, DIV GASTROENTEROL, S-22185 LUND, SWEDEN
COUNTRY OF AUTHOR: SWEDEN
SOURCE: JOURNAL OF PEDIATRIC GASTROENTEROLOGY AND NUTRITION, (NOV 1998) Vol. 27, No. 5, pp. 560-567.
Publisher: LIPPINCOTT-RAVEN PUBL, 227 EAST WASHINGTON SQ, PHILADELPHIA, PA 19106.
ISSN: 0277-2116.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: LIFE; CLIN
LANGUAGE: English
REFERENCE COUNT: 37

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Background: There is a renewed interest in metabolism of sphingolipids because of their role in signal transduction. Sphingomyelin is the

dominating phospholipid in human milk but its metabolism and possible function in the gastrointestinal tract of breast fed infants is unknown. We explored whether bile salt-stimulated milk lipase has a role in sphingolipid metabolism.

Methods: In vitro assays of sphingomyelinase and **ceramidase** activities, using radiolabeled substrates, human milk samples and **purified** native and recombinant variants of bile salt-stimulated milk lipase with or without known activators or inhibitors.

Results: Human whey and **purified** Lipase catalysed hydrolysis of palmitoyl-labeled ceramide with the highest rate around pH 8.5-9.0. 1 mg of lipase hydrolysed 0.7 mu mol ceramide in one hour at pH 8.5 in presence of 4 mM bile salt. The activity of whey was inhibited by antibodies towards human bile salt-stimulated milk lipase, indicating that this lipase accounted for virtually all **ceramidase** activity in the milk. In contrast, bile salt-stimulated milk lipase showed no activity against sphingomyelin. However we give evidence of a separate, hitherto unknown, acid sphingomyelinase in human milk. Under the used in vitro conditions this sphingomyelinase could account for hydrolysis of half of milk sphingomyelin in one hour.

Conclusions: Human milk bile salt-stimulated milk lipase hydrolyses ceramide and may thus have a role in sphingomyelin digestion, but only after initial hydrolysis to ceramide and phosphorylcholine. Part of the latter could be carried out in the stomach by the acid milk sphingomyelinase now described. We speculate that these two milk enzymes may be of importance for optimal use of human milk sphingolipids.

L23 ANSWER 7 OF 11 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 1998354660 MEDLINE
DOCUMENT NUMBER: 98354660 PubMed ID: 9690203
TITLE: Fluorinated anesthetic exposure "activates" the renal cortical sphingomyelinase cascade.
AUTHOR: Lochhead K M; Zager R A
CORPORATE SOURCE: Department of Medicine, University of Washington, Seattle, USA.
CONTRACT NUMBER: DK38432 (NIDDK)
SOURCE: KIDNEY INTERNATIONAL, (1998 Aug) 54 (2) 373-81. Journal code: 0323470. ISSN: 0085-2538.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199810
ENTRY DATE: Entered STN: 19981021
Last Updated on STN: 19981021
Entered Medline: 19981015

AB BACKGROUND: Previous studies indicate that fluorinated anesthetics can enhance sphingomyelin (SM) hydrolysis in in vitro neuronal extracts. Renal cortex has substantial SM content. Hence, this study assessed whether in vivo fluorinated anesthetic use stimulates renal SM hydrolysis, causing accumulation of ceramide, an important signaling molecule. METHODS: **Mice** were anesthetized with isoflurane or desflurane (fluorinated anesthetics). Pentobarbital anesthetized **mice** served as controls. After six hours, kidney cortex was assayed for ceramide. In selected experiments, renal cortical sphingosine and sphingomyelinase (SMase) levels were also determined. Isoflurane's effects on ceramide levels in cultured human proximal tubule (HK-2) cells/ **isolated mouse** proximal tubule segments (PTS), and on in vitro 14C-SM hydrolysis were also assessed. RESULTS: Isoflurane and desflurane, but not pentobarbital, increased renal cortical ceramide levels (such as, 65% with isoflurane, $P < 0.003$). Isoflurane also raised PTS/HK-2 ceramide levels (by 25 to 35%). **Ceramidase** inhibition (fumonisin B1) did not block this ceramide accumulation in HK-2 cells. Isoflurane did not increase renal cortical/PTS SMase levels. However, it directly enhanced the ability of (acidic) SMase to effect in vitro 14C-SM hydrolysis. Isoflurane raised renal cortical sphingosine (and not just ceramide) levels, implying ongoing **ceramidase** activity. CONCLUSIONS: Fluorinated anesthetics can stimulate renal cortical/tubule ceramide expression, presumably by stimulating SMase-mediated SM hydrolysis. Since ceramide is a potential mediator of tubule apoptosis/necrosis, these findings have potential relevance for the development of intra/post-operative acute renal failure.

L23 ANSWER 8 OF 11 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 1998317541 MEDLINE
DOCUMENT NUMBER: 98317541 PubMed ID: 9653654
TITLE: Cloning and **characterization** of the full-length cDNA and genomic sequences encoding murine acid **ceramidase**.
AUTHOR: Li C M; Hong S B; Kopal G; He X; Linke T; Hou W S; Koch J; Gatt S; Sandhoff K; Schuchman E H
CORPORATE SOURCE: Department of Human Genetics, Mount Sinai School of Medicine, New York, New York 10029, USA.
CONTRACT NUMBER: HD 28607 (NICHD)
SOURCE: GENOMICS, (1998 Jun 1) 50 (2) 267-74.
Journal code: 8800135. ISSN: 0888-7543.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF157500
ENTRY MONTH: 199810
ENTRY DATE: Entered STN: 19981008
Last Updated on STN: 20000303
Entered Medline: 19981001

AB The full-length cDNA and genomic sequences encoding murine acid **ceramidase** (AC; E.C. 3.5.1.23) have been **isolated** and **characterized**. The 2176-bp cDNA was approximately 80% identical to the human cDNA (Koch et al., 1996) and predicted a 394-amino-acid polypeptide that was approximately 90% identical to the human protein. A fluorescence-based assay system was developed to determine AC enzymatic activity, and transfection of COS-1 cells with the full-length **mouse** cDNA led to increased AC activity, demonstrating its functionality. The murine AC gene, which spanned approximately 38 kb, consisted of 14 exons separated by 13 introns. The exons ranged in size from 46 to 1038 bp and were flanked by exon/intron junctions that adhered closely to known donor and acceptor splice site consensus sequences. Exon 1 encoded the putative translation start site and the signal peptide region, while exon 14 encoded the carboxy end of the AC polypeptide and all of the 3' untranslated region. Sequence analysis of a 497-bp region upstream from the first in-frame ATG revealed several features of a housekeeping promoter, as well as several tissue-specific and/or hormone-inducible regulatory sites. Insertion of this sequence into a chloramphenicol acyltransferase (CAT) expression vector led an approximately fivefold increase in CAT activity after transfection into NIH3T3 cells. Northern blot analysis and enzymatic assays also were carried out on various murine tissues to examine AC expression. Of the tissues studied, the highest AC activity and mRNA levels were found in the kidney, followed by the brain; almost no AC activity or mRNA was found in the testis or skeletal muscle. These latter studies provided clear evidence that despite the housekeeping function of AC, its expression was tissue-specific.

L23 ANSWER 9 OF 11 MEDLINE on STN DUPLICATE 5
ACCESSION NUMBER: 96301666 MEDLINE
DOCUMENT NUMBER: 96301666 PubMed ID: 8737258
TITLE: Programmed cell death in neurotumour cells involves the generation of ceramide.
AUTHOR: Wiesner D A; Dawson G
CORPORATE SOURCE: Department of Pediatrics, University of Chicago School of Medicine, IL 60637, USA.
CONTRACT NUMBER: HD-06426 (NICHD)
SOURCE: GLYCOCONJUGATE JOURNAL, (1996 Apr) 13 (2) 327-33.
Journal code: 8603310. ISSN: 0282-0080.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199610
ENTRY DATE: Entered STN: 19961025
Last Updated on STN: 19980206
Entered Medline: 19961016

AB Ceramide has been typically thought of as the membrane anchor for the

carbohydrate in glycosphingolipids but many studies have suggested that it may cause apoptosis. Apoptosis or programmed cell death (PCD) is thought to be responsible for the death of one-half of neurons surviving the development of the nervous system. The potential involvement of the sphingomyelin-ceramide signaling process as an integral part of PCD was therefore examined in several neurotumour cell lines. We show that synthetic C2-ceramide (N-acetylsphingosine), a soluble ceramide analogue, can rapidly trigger PCD in these cells, **characterized** by: 1) classic DNA laddering on agarose gels; 2) DNA fragmentation as determined by Hoechst Dye; and 3) cell viability (mitochondrial function and intact nuclei) assays. We report that staurosporine can both activate PCD (by all three criteria above) in neurotumour cells and increase both the formation of ceramide and ceramide mass. Both ceramide formation and the induction of PCD were further enhanced by the co-addition of a **ceramidase** inhibitor oleoylethanolamine (25 microM). Staurosporine and oleoylethanolamine were similarly effective in inducing ceramide formation and PCD in immortalized hippocampal neurons (HN-2) and immortalized dorsal root ganglion cells (F-11). Our data suggests that formation of ceramide is a key event in the induction of PCD in neuronally derived neurotumour cells.

L23 ANSWER 10 OF 11 LIFESCI COPYRIGHT 2003 CSA on STN
ACCESSION NUMBER: 93:109140 LIFESCI
TITLE: Dexamethasone increase neutral sphingomyelinase activity and sphingosine levels in 3T3-L1 fibroblasts.
AUTHOR: Ramachandran, C.K.; Murray, D.K.; Nelson, D.H.
CORPORATE SOURCE: Dep. Med., Univ. Utah Sch. Med., Salt Lake City, UT 84132, USA
SOURCE: BIOCHEM. BIOPHYS. RES. COMMUN., (1990) vol. 167, no. 2, pp. 607-613.
DOCUMENT TYPE: Journal
FILE SEGMENT: M
LANGUAGE: English
SUMMARY LANGUAGE: English
AB The activity of neutral sphingomyelinase in a plasma membrane enriched fraction was found to be increased in dexamethasone treated cells. The elevation of sphingomyelinase activity was blocked by cycloheximide indicating that protein synthesis was required for the steroid action. **Ceramidase** activity was unaffected by the dexamethasone treatment.

L23 ANSWER 11 OF 11 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
ACCESSION NUMBER: 1982:186022 BIOSIS
DOCUMENT NUMBER: PREV198273046006; BA73:46006
TITLE: THE GLYCOSYL **CERAMIDASE** IN THE MURINE INTESTINE **PURIFICATION** AND SUBSTRATE SPECIFICITY.
AUTHOR(S): KOBAYASHI T [Reprint author]; SUZUKI K
CORPORATE SOURCE: ROSE F KENNEDY CENT RES MENT RETARDATION HUM DEV, ALBERT EINSTEIN COLL MED, BRONX, NY 10461, USA
SOURCE: Journal of Biological Chemistry, (1981) Vol. 256, No. 15, pp. 7768-7773.
CODEN: JBCHA3. ISSN: 0021-9258.
DOCUMENT TYPE: Article
FILE SEGMENT: BA
LANGUAGE: ENGLISH
AB The intestinal glycosylceramidase of the **mouse** which was reported previously as a taurodeoxycholate-activated galactosylceramidase (Kobayashi et Suzuki (1981)) was **purified** to homogeneity. The enzyme gave a single band of a MW of 130,000 in the sodium dodecyl sulfate-polyacrylamide gel electrophoresis. The MW estimated by Sepharose 4B or Sephadex G-200 gel filtration under nondenaturing conditions was 290,000-300,000. In the double immunodiffusion test, rabbit antiserum raised against the **purified** enzyme gave a single precipitin band against the enzyme, but no cross-reactivity was observed against the brain or kidney galactosylceramidase (EC 3.2.1.46). The **purified** enzyme was active toward 4-methylumbelliferyl .beta.-D-galactoside, .beta.-D-glucoside, .beta.-D-xyloside, .beta.-D-fucoside and .alpha.-L-arabinoside. Among potential glycolipid substrates the enzyme was active in the presence of sodium taurodeoxycholate, galactosylceramide, glucosylceramide, lactosylceramide, galactosylsphingosine and glucosylsphingosine. It was inactive toward GM1 ganglioside [galactose-N-acetyl-galactosaminyl [N-acetylneuraminyl]-

galactosyl-glucosyl-ceramide], asialo-GM1 ganglioside, desialylate fetuin and desialylated transferrin. Among disaccharides the enzyme showed the highest catalytic activity toward lactose (18.9 .mu.mol/min per mg of protein) and the lowest toward galactose .beta.(1 .fwdarw. 4)-N-acetylglucosamine (0.06 .mu.mol/min per mg of protein). Galactose .beta.(1 .fwdarw. 6)-N-acetylglucosamine was not hydrolyzed. Phlorizin was also a substrate for the enzyme.

=> log y

WEST Search History

DATE: Tuesday, October 28, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L2	ceramidase same (mice or mouse)	12	L2
DB=USPT,JPAB,EPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L1	ceramidase same (mice or mouse)	4	L1

END OF SEARCH HISTORY